

**REMARKS/ARGUMENTS**

Claims 1 - 9 are pending. Claims 1, 3, and 5 have been amended. Claim 9 has been appended.

Claims 1 - 8 were rejected under 35 U.S.C. 102(b) for allegedly being anticipated by U.S. Patent No. 5,875,349, Cornaby et al.

The Examiner's suggestion for a corrected title is appreciated. The title has been amended accordingly.

The specification has been amended to spell out the acronym CRC. Additional informalities in the specification that have been discovered have been corrected.

The present invention is directed to an external storage subsystem. As recited in amended claim 1, the storage subsystem comprises a plurality of disk drives, a channel interface unit, and a drive interface control unit. The channel interface unit is for "connection to a supervisory unit ... for reading and writing data, the supervisory unit being separate from the external storage system." The drive interface control unit communicates with the disk drives to exchange data.

Claim recites a "a cache memory connected to the drive interface control unit and to the channel interface control unit." An aspect of the invention is the "staging of the data to the cache memory and destaging of the data from the cache memory are performed according to staging and destaging instructions from the supervisory unit.""

The RAM memory 28 in hard drive 27 shown in Fig. 1 of Cornaby et al. was asserted to be a cache. Respectfully, the Examiner is believed to be in error. "The initialization process for hard disk drive 27 includes loading information such as a defect list of all of the defective memory locations on the hard disk drive from the memory storage of hard disk drive 27 into RAM memory buffer 28 so that this information is available for use by disk drive firmware 30 throughout the operation of disk drive 27." *Col. 4, lines 23 - 29.* RAM memory buffer 28 is not a cache.

Assuming *arguendo* that RAM memory buffer 28 of hard drive 27 shown in Fig. 1 of Cornaby et al. is a cache, Cornaby et al. do not show that their host computer module 11

manipulates a cache that is on the hard drive 27. More particularly, Cornaby et al. do not discuss the idea of instructions to perform staging and destaging operations on a cache. By contrast, a salient aspect of the present invention is the “staging of the data to the cache memory and destaging of the data from the cache memory are performed according to staging and destaging instructions from the supervisory unit” where the cache memory is on the external storage subsystem and thus separate from the supervisory unit.

A further aspect of the invention is “the instructions formulated by the supervisory unit according to criteria provided by a user.” Cornaby et al. clearly cannot disclose this aspect of the invention since their host computer module 11 does not issue cache manipulation operations to manipulate a cache on a hard drive. Cornaby et al. do not appear to disclose that their host computer module issues cache staging and destaging instructions to stage and destage cache data of a cache on a hard drive.

A further aspect of the invention is “a shared memory connected to the drive interface control unit and to the channel interface control unit . . . for storing information relating to data that is to be staged to the cache memory.” The host computer module 11 of Cornaby et al. does not appear to issue instructions to manipulate cache data of a cache on a hard drive. Consequently, Cornaby et al. do not show a shared memory on the hard drive “for storing information relating to data that is to be staged to the cache memory.”

Reconsideration of the claims in light of the amended claims and the foregoing distinctions between the present invention and Cornaby et al. is respectfully requested

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PATENT

**CONCLUSION**

All claims now pending in this Application are believed to be in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

  
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